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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,012	06/24/2003	Young Sun Hwang	30205/39412	2436

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EXAMINER

CHACKO DAVIS, DABORAH

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 12/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/603,012

Applicant(s)

HWANG ET AL.

Examiner

Daborah Chacko-Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 5-8, and 10, rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Patent No. 6,815,142 (Kimura et al).

Kimura, in col 3, lines 10-21, in col 4, lines 5-25, discloses a method of forming a resist pattern comprising forming a resist film on a substrate (underlayer), forming an overlying resist layer (photoresist overcoating) of the claimed composition on the resist film, performing an exposure on the resist layers, post-baking (PEB) the exposed resist layers and developing the baked resist layers to form the resist pattern. Kimura, in col 6, lines 43-60, discloses that the overlying resist pattern composition has a water-soluble component, and includes poly (N, N-dimethylacrylamide) (claims 5, and 8). Kimura, in col 3, lines 19-21, and lines 55-65, discloses that the overlying resist composition comprises a chemically amplified resist composition (acid generator) (claim 6). Kimura, in col 3, lines 15-17, and lines 63-64, discloses that the overlying resist layer exposure process is performed using UV radiations (claim 7). Kimura, in col 7,

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lines 56-58, discloses that the claimed compound is in an amount ranging from 0.01 to 50 wt % by weight (claim 10).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 9, is rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 6,815,142 (Kimura et al) in view of U. S. Patent Application Publication No. 2003/0008968 (Sugeta et al).

Kimura is discussed in paragraph no. 2.

The difference between the claim and Kimura is that Kimura does not disclose that the solvent of the overlying resist layer composition comprises distilled water (claim 9).

Sugeta, in [0013], [0014], and [0019], discloses a photoresist overcoating composition comprising a solvent, and a water-soluble polymer such as N,N-dimethylacrylamide (Formula I). Sugeta, in [0019], and [0021], discloses that the solvent in the composition is water.

Therefore, it would be obvious to a skilled artisan to modify Kimura by employing the method of using water as the solvent in the overlying material composition as taught by Sugeta because Kimura, in col 5, lines 33-42, in col 6, lines 45-48, and in col 8, lines

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discloses that the overlying composition is a water-soluble composition, and that incorporating water-soluble overlying material improves the environmental resistance in the overlying layer.

Response to Arguments

5. Applicant's arguments filed on September 30, 2004, with respect to claims 5-10, have been considered but are moot in view of the new ground(s) of rejection.

6. Applicant's arguments, see Remarks, filed September 30, 2004, with respect to the 102(e) rejection of U. S. Patent Application Publication No. 2003/0219682 (Wakiya) have been fully considered and are persuasive. The 102(e) rejection of Wakiya has been withdrawn.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daborah Chacko-Davis whose telephone number is (571) 272-1380. The examiner can normally be reached on M-F 9:30 - 6:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F Huff can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

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applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dcd

December 21, 2004.